UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JAN 15 2020

Ms. Julie Espy
Acting Director
Division of Environmental Assessment & Restoration
Florida Department of Environmental Protection
Mail Station 3000
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Ms. Espy:

The U.S. Environmental Protection Agency has completed its review of the document titled *Final TMDL Report Nutrient TMDLs for Lake Persimmon and Documentation in Support of the Development of Site-Specific Numeric Interpretations of the Narrative Nutrient Criterion (WBID[1] 1938E)*. The Florida Department of Environmental Protection (FDEP) submitted the Lake Persimmon Total Maximum Daily Loads (TMDLs) and revised Chapter 62-304, Florida Administrative Code (F.A.C.),[2] including the numeric nutrient criteria (NNC) for the subject water, in a letter to the EPA dated December 4, 2019 as TMDLs and as new or revised water quality standards (WQS) with the necessary supporting documentation and certification by FDEP General Counsel, pursuant to Title 40 of the Code of Federal Regulations part 131.

The NNC were adopted under Chapter 62-304.515(6) as site-specific numeric interpretations of paragraph 62-302.530(48)(b). As referenced in paragraph 62-302.531(2)(a), the FDEP intends for the submitted NNC to serve in place of the otherwise applicable criteria for lakes set out in paragraph 62-302.531(2)(b). The total nitrogen and total phosphorus TMDLs for Lake Persimmon would also constitute site-specific numeric interpretations of the narrative nutrient criteria set forth in paragraph 62-302.530(48)(b), for this water segment.

The FDEP submitted the Lake Persimmon TMDLs to the EPA for review pursuant to both Clean Water Act (CWA) sections 303(c) and 303(d) since the TMDLs will also act as Hierarchy 1 (H1) site-specific interpretations of the State's narrative nutrient criterion pursuant to 62-302.531(2)(a)1.a. The enclosed WQS decision document summarizes the EPA's review and approval of the WQS contained in the TMDL document. The EPA's decision document memorializes the EPA's review and approval of the water quality standard, in accordance with 303(c); nothing herein should be construed to constitute a review or approval of a TMDL pursuant to 303(d).

[1] WBID refers to waterbody identification
[2] Unless otherwise stated, all rule and subsection citations are to provisions in the Florida Administrative Code.

In accordance with section 303(c) of the CWA, I am hereby approving the revised WQS for total nitrogen and total phosphorus. Any other criteria applicable to this waterbody remain in effect, especially those related to chlorophyll *a*. The requirements of paragraph 62-302.530(48)(a) also remain applicable.

If you have any comments or questions relating to the approval of the H1 WQS, please contact me at (404) 562-9345, or have a member of your staff contact Dr. Katherine Snyder in the WQS program at (404) 562-9840.

Sincerely,

Jeaneanne M. Gettle, Director
Water Division

Enclosure

cc: Mr. Kenneth Hayman, FDEP
Mr. Daryll Joyner, FDEP
Mr. Ansel Bubel, FDEP

Florida Numeric Interpretation of the Narrative Nutrient Water Quality Criterion Through Total Maximum Daily Loads (TMDLs) to Establish a Hierarchy 1 (H1): Water Quality Standards (WQS) Decision Document

H1: Nutrient TMDLs for Lake Persimmon (**water**body **id**entification (WBID) 1938E)

Location: Highlands County, Florida

Status: Final

Criteria Parameter(s): The Lake Persimmon TMDL allocation for WBID 1938E is 1,247 lbs/yr for total nitrogen (TN) and 58 lbs/yr for total phosphorus (TP) expressed as rolling 7-year averages of annual loads, not to be exceeded.

Background: The Florida Department of Environmental Protection (FDEP) submitted the final H1 for the *Final TMDL Report Nutrient TMDLs for Lake Persimmon (WBID 1938E) and Documentation in Support of the Development of Site-Specific Numeric Interpretations of the Narrative Nutrient Criterion* (the "report") by letter dated December 4, 2019. The draft report for Lake Persimmon is dated May 2018 and was received by the EPA on May 9, 2018. The final Lake Persimmon report dated July 2018 includes H1 target concentrations and loads. A final report was received by the EPA on December 6, 2019.

The submission included:

- Submittal letter
- Nutrient TMDLs for Lake Persimmon and Documentation in Support of the Development of Site-Specific Numeric Interpretations of the Narrative Nutrient Criterion
- Documents related to Public Workshop
- Documents related to Public Hearing
- Documents related to Public Notice for Rulemaking and Rule Adoption
- Public Comments Received

This document explains how the submission meets the Clean Water Act (CWA) statutory requirements for the approval of WQS under section 303(c) and the EPA's implementing regulations in Title 40 of the Code of Federal Regulations (40 C.F.R.) part 131. The decision document memorializes the EPA's review and approval of the water quality standard, in accordance with 303(c); nothing herein should be construed to constitute a review or approval of a TMDL pursuant to 303(d).

WQS REVIEWER: Lauren Petter, WQS Coordinator, Petter.Lauren@epa.gov

This document contains the EPA's review of the above-referenced H1. This review document includes WQS review guidelines that state or summarize currently effective statutory and regulatory requirements applicable to this approval action. Review guidelines are not themselves regulations. Any differences between review guidelines and the EPA's implementing regulations should be resolved in favor of the regulations themselves. The italicized sections of this document describe the EPA's statutory and regulatory requirements for approvable H1s. The sections in regular type reflect the EPA's analysis of the state's compliance with these requirements.

I. WQS Decision – Supporting Rationale

Section 303(c) of the CWA and the EPA's implementing regulations at 40 CFR section 131 describe the statutory and regulatory requirements for approvable WQS. Set out below are the requirements for WQS submissions, under the CWA and the regulations. The information identified below is necessary for the EPA to determine if a submitted WQS meets the requirements of the CWA and, therefore, may be approved by the EPA.

1. Use Designations

Section 131.10(a) provides that each state must specify appropriate water uses to be achieved and protected. The classification of the waters of the state must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. In no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the United States.

Assessment: Lake Persimmon is classified as Class III Freshwater (fish consumption; recreation; and propagation and maintenance of a healthy, well-balanced population of fish and wildlife).

2. Protection of Downstream Uses

Section 131.10(b) provides that in designating uses of a waterbody and the appropriate criteria for those uses, the state shall take into consideration the WQS of downstream waters and shall ensure that its WQS provide for the attainment and maintenance of the WQS of downstream waters.

Rule 62-302.531(4) of the Florida Administrative Code (F.A.C.) requires that downstream uses be protected.

There are no defined drainage canals or streams connecting Lake Persimmon to downstream waterbodies, but a narrow, man-made ditch on the northwest side of the lake is the only outlet during a high-flow regime. During normal flow conditions, the lake most likely seeps out to the adjacent marsh terrain via subsurface interflow and baseflow to maintain and balance its water level. The seepage flow from the lake may eventually drain through the marsh terrain to Josephine Creek, 1.1 miles northeast of Lake Persimmon. Based on the Cycle 3 assessment, Josephine Creek was listed as verified impaired for nutrients (macrophytes), while chlorophyll *a* was not assessed because of insufficient data during the verified period. Since there is no direct hydrologic connection of Lake Persimmon to a remote creek, Josephine Creek, the outflow from Lake Persimmon will not have an impact on water quality of the creek. However, the restoration targets for Lake Persimmon compared with the applicable stream nutrient thresholds for Peninsular streams (0.12 mg/L of TP, and 1.54 mg/L of TN, expressed as annual geometric means (AGMs) not to be exceeded more than once in any 3-year period [DEP 2013b]), show that the restoration targets of Lake Persimmon will meet the applicable stream nutrient thresholds. Therefore, the Lake Persimmon TMDL will be protective of stream water quality.

Assessment: The H1 is providing use protection for the downstream waters.

3. Water Quality Criteria

Section 131.11(a) provides that states must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.

Lake Persimmon was found to be impaired for chlorophyll *a* and TN because the AGMs exceeded the numeric nutrient criteria (NNC) more than once in a 3-year period (in 2013 to 2016 for chlorophyll *a*, and in 2004 and from 2013 to 2016 for TN). To establish the nutrient targets for Lake Persimmon, the FDEP used the generally applicable 20 µg/L chlorophyll *a* criterion as a target because this level is protective of designated uses for low-color and high alkalinity lakes.

In order to determine site-specific TN and TP targets for the TMDLs, the FDEP used the calibrated Hydrological Simulation Program – FORTRAN (HSPF) model to achieve an in-lake chlorophyll *a* AGM concentration of 20 µg/L. The maximum of the 7-year rolling averages of TN and TP loadings to achieve the chlorophyll *a* target was determined by decreasing watershed TN and TP loads from anthropogenic sources into the lake until the chlorophyll *a* target was achieved in every year. Nutrient concentrations were also provided for comparative purposes only. The in-lake TN and TP AGM concentrations for Lake Persimmon at the allowable TMDL loading are 1.48 and 0.02 mg/L, respectively.

Assessment: The Lake Persimmon TMDL allocation is 1,247 lbs/yr for TN and 58 lbs/yr for TP expressed as rolling 7-year averages of annual loads, not to be exceeded. These criteria are expressed as loads, but the equivalent concentrations were also provided for comparison purposes only. The load-based criteria were set to ensure the existing chlorophyll a criterion is met and, therefore, will protect the designated uses for this waterbody. Any other criteria applicable to this waterbody remain in effect, including the chlorophyll *a* criterion set out in 62-302.531(2)(b) F.A.C.

4. Scientific Defensibility

Section 131.11(b) provides that, in establishing criteria, states should establish numerical values based on 304(a) guidance, 304(a) guidance modified to reflect site-specific conditions, or other scientifically defensible methods.

To establish the nutrient targets for Lake Persimmon, the FDEP used the generally applicable 20 µg/L chlorophyll *a* criterion as a target because this level is protective of designated uses for low-color and high alkalinity lakes. The Lake Persimmon TMDL document highlights that the FDEP found no unique characteristics within Lake Persimmon that would make the use of the generally applicable chlorophyll *a* criterion inappropriate for the lake. The model simulations also indicated that the target chlorophyll *a* would be met in all years based on the adopted TN and TP loads.

Assessment: The EPA determined that the selection of a chlorophyll *a* value of 20 µg/L as the response variable target is appropriate and the technical approach to calculate the total watershed nutrient loads results is scientifically sound. This approach, which utilized tbe HSPF model to calculate the protective nutrient loads, is described in the cited TMDL document.

5. Public Participation

Section 131.20(b) provides that states shall hold a public hearing when revising WQS, in accordance with provisions of state law and the EPA's public participation regulation (40 CFR part 25). The proposed WQS revision and supporting analyses shall be made available to the public prior to the hearing.

A public workshop was conducted by the FDEP on June 7, 2018 in Sebring, Florida, to obtain comments on the draft nutrient TMDLs for Lake Persimmon. The workshop notice indicated that the nutrient TMDLs, if adopted, constitute site-specific numeric interpretations of the narrative criterion set forth in paragraph 62-302.530(48)(b), F.A.C., that would replace the otherwise applicable NNC in subsection 62-302.531(2), F.A.C., for these particular waters. A public hearing was also held on September 28, 2018 in Tallahassee, Florida.

Assessment: The FDEP has met the public participation requirements for this H1.

6. Certification by the State Attorney General

Section 131.6(e) requires that the state provide a certification by the state Attorney General or other appropriate legal authority within the state that the WQS were duly adopted pursuant to state law.

A letter from the FDEP General Counsel, Justin G. Wolfe, dated December 4, 2019, certified that the Lake Persimmon TMDLs were duly adopted as WQS pursuant to state law.

Assessment: The FDEP has met the requirement for Attorney General certification for this H1.

7. Endangered Species Act Section 7 Consultation

Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies, in consultation with the Services, to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of designated critical habitat of such species.

The existing default numeric nutrient criteria for the waterbody received concurrence by U.S. Fish and Wildlife Service (USFWS) on July 31, 2013. Because the site-specific criterion for TN in this report is within the default criteria, an additional ESA section 7 consultation for this standards action is not required.

USFWS provided concurrence with the EPA's programmatic consultation on site-specific nutrient criteria for the FDEP on July 21, 2015 for any site-specific nutrient criteria that are more stringent than the existing default nutrient criteria in place in the state of Florida for the waterbody. Because the site-specific criteria in this report for TP is more stringent than the default criteria, an additional ESA section 7 consultation for this standards action is not required.

Assessment: The EPA has met the ESA requirements for this action.

II. Conclusion

The EPA Region 4 Water Division Director is **APPROVING** the H1 NNC addressed by this decision document in accordance with section 303(c) of the CWA, as consistent with the CWA and 40 C.F.R. part 131.

The H1 NNC presented in this decision document will constitute the site-specific numeric interpretation of the narrative nutrient criterion set forth in paragraph 62-302.530(48)(b), F.A.C., that will replace the otherwise applicable numeric criteria for TN and TP in subsection 62-302.531(2) for this particular water, pursuant to paragraph 62-302.531(2)(a)1.b., F.A.C. Based on the chemical, physical, and biological data presented in the development of the H1 NNC outlined above, the EPA concludes that the revised NNC for TN and TP provide for and protect healthy, well-balanced, biological communities in the waters to which the NNC apply and are consistent with the CWA and its implementing regulations at 40 C.F.R. § 131.11.

Therefore, the revised nutrient criteria for TN and TP for Lake Persimmon are 1,247 lbs/yr for TN and 58 lbs/yr for TP expressed as rolling 7-year averages of annual loads, not to be exceeded. All other criteria applicable to this waterbody remain in effect, including other applicable criteria at 62-302.531(2)(b), F.A.C. The requirements of paragraph 62-302.530(48)(a), F.A.C. also remain applicable.

The EPA's decision document memorializes the EPA's review and approval of the water quality standard, in accordance with section 303(c) of the CWA; nothing herein should be construed to constitute a review or approval of a TMDL pursuant to 303(d).